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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/676,409
Filing Date: October 01, 2003
Appellant(s): ZHANG ET AL.

Susan M. Manriquez
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 12, 2009 appealing from the Office action mailed May 12, 2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Arunapuram et al. (U.S. Patent Publication No. 2002/0019759)

Morimoto (U.S. Patent No. 7,035,856)

Cappellini (U.S. Patent Publication No. 2003/0014286)

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 2, 4, 5, 7 – 10, 13 – 16, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arunapuram et al. (2002/0019759) in view of Morimoto (7,035,856).**

As per claim 1, Arunapuram discloses, an apparatus comprising:
a demand order module to receive an order for a set of products to be shipped to a target location ([0034]; via specifically, referring to FIG. 2, after shipping orders are received 201, a first manager module);

an order guideline module including a set of constraints for a shipment from one of a set of a source locations to the target location ([0034]; via the problem-solver ("PS") module 300 of FIG. 3, plans at step 202 optimal freight movements between a initial pick-up location and a final drop-off location); and

a processing device to execute the route determination module ([0034]; via at step 203, the optimal freight movements are planned in step 202 are executed and tracked by a second manager module, the execution ("EX") module 400 of FIG. 4).

However, Arunapuram fails to explicitly disclose a route determination module to select at least one source location from the set of source locations having the set of products when the order for the set of products is fulfilled based on a cost factor and a utilization of a capacity of a set of transports.

Morimoto teaches a system and method for tracking and routing shipped items with the feature of a route determination module to select at least one source location from the set of source locations having the set of products when the order for the set of products is fulfilled based on a cost factor and a utilization of a capacity of a set of transports ([abstract]) discusses determining a route from a subset of source locations.

From this teaching of Morimoto, it would have been obvious to modify the system and method of Arunapuram, to include the route determination module taught by Morimoto in order to provide adequate routing for the items.

As per claim 2, Arunapuram further discloses comprising:

a storage device to store at least one of the demand order module, the guideline module, and the route determination module ([0007]; via the parcel ID and its location information are then transmitted by the host computer to one or more web servers, each including a database for storing a record of the parcel ID's scanned at each location).

As per claim 4, Arunapuram discloses,

prioritizing a set of shipping rule groups based on a cost factor associated with the set of source locations and the target location ([0055]; via a particularly advantageous feature of the present invention involves the use of priority routing rules in the PS database that enable a transportation planning manager to influence the creation of loads and freight movements when lowest cost is not the most important consideration);

and selecting a subset of the set of source locations and a subset of the shipping rule groups based on the cost factor and a utilization of a capacity of a set of transports ([0055]; via typically, after it identifies all potential suitable freight movements for each order, the PS logic identifies the lowest cost transportation

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solution).

However, Arunapuram fails to explicitly disclose identifying a set of source locations having a set of desired resources for a target location when an order for the set of desired resources is fulfilled.

However, Arunapuram fails to explicitly disclose identifying a set of source locations having a set of desired resources for a target location when an order for the set of desired resources is filled.

Morimoto teaches a system and method for tracking and routing shipped items with the feature of identifying a set of source locations having a set of desired resources for a target location when an order for the set of desired resources is fulfilled ([abstract] discusses identifying a set of source locations).

From this teaching of Morimoto, it would have been obvious to modify the system and method of Arunapuram, to include the identifying of a set of source locations taught by Morimoto in order to further provide adequate routing for the items.

As per claim 5, Arunapuram discloses, wherein selecting comprises: searching iteratively through the set of shipping rule groups ([0113]; Once received, carriers can review tender offers and electronically provide an acceptance or decline (the EX monitoring this acceptance/decline communication at step 606) of the tender offer to the execution module 400 via response interface 412. The EX logic can then re-route any declined orders back to the

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problem-solver module 300 as unexecuted orders 411 through unexecuted freight movement interface 410 for selection of a different carrier or transportation solution. Fig. 6 also illustrates iterative searching through a control loop) in order of priority for a shipping solution ([0055]; A particularly advantageous feature of the present invention involves the use of priority routing rules in the PS database that enable a transportation planning manager to influence the creation of loads and freight movements when lowest cost is not the most important consideration).

As per Claim 7, Arunapuram discloses, wherein the set of shipping rule groups includes a default group of shipping rules ([0057]; via These rates are specified in a plurality of tables which are stored in the PS database 402 for use during batch runs. such rate tables are stored therein for each carrier type).

As per claim 8, Arunapuram discloses, wherein the utilization of the capacity of the set of transports is a maximum utilization ([0058]; via when the PS logic begins its batch run at step 603 to generate an optimal freight movement plan (for all orders received since its last batch run) it performs several sub-steps which are detailed in FIG. 7).

As per claim 9, Arunapuram discloses, further comprising:
altering a size of a shipment to utilize a maximum capacity of the set of transports ([0059]; via during a batch run, the problem-solver logic 301 first

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consolidates various orders and shipments into transportation loads at sub-step 701. Then, a determination is made at sub-step 702 for each load as to the best shipping mode).

As per claim 10, Arunapuram discloses, an apparatus comprising:

a means for ordering a set of shipping rule groups and a subset of source locations based on a cost of shipping to a target location from the set of source locations ([0059]; via the system uses various types of information including data detailing the required freight movements, tables itemizing resource availability and cost, operational requirements of the industry, and general company rules and policies entered by the company's transportation planning manager); and

a means for selecting a subset of the set of shipping rule groups and a subset of the set of source locations ([0010]; This functionality would also allow an organization to dynamically select crossdock and pool point locations (i.e., transportation hubs or through-points) based upon the organization's business requirements and costs) based on the cost of shipping the set of resources from the subset of the set of source locations to the target location and utilization of a set of transports ([0055]; via a particularly advantageous feature of the present invention involves the use of priority routing rules in the PS database that enable a transportation planning manager to influence the creation of loads and freight movements when lowest cost is not the most important consideration);

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However, Arunapuram fails to explicitly disclose a means for determining a set of source locations having a set of resources when an order for the set of resources is fulfilled.

Morimoto teaches a system and method for tracking and routing shipped items with the feature of a means for determining a set of source locations having a set of resources when an order for the set of resources is fulfilled ([abstract]) discusses determining a route from a subset of source locations.

From this teaching of Morimoto, it would have been obvious to modify the system and method of Arunapuram, to include means for determining a set of source locations taught by Morimoto in order to provide adequate routing for the items.

As per claim 12, Arunapuram discloses, wherein the set of shipping rule groups includes a default shipping rule group ([0054]; via transportation planning managers can, for example, by using the manager interface 404, define route planning rules, create templates that define legs for multiple leg routes and multiple mode routes (the entering of such templates, while done at step 601 prior to a batch run, will be discussed in detail below with respect to step 603).

As per claim 13, Arunapuram discloses, further comprising:
a means for determining all source locations having the set of resources ([0034]; via the problem-solver ("PS") module 300 of FIG. 3, plans at step 202

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optimal freight movements between a initial pick-up location and a final drop-off location).

As per claim 14, Arunapuram discloses, a machine readable medium containing therein a set of instructions which when executed cause a machine to perform a set of operations comprising (pg 18, col. 1, lines 59 - 61; via program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for managing transportation operations for a plurality of orders):

prioritizing a set of order guidelines based on a cost factor for shipping the set of products from the set of source locations to the target location (pg 18, col. 2, lines 6 - 10; via wherein said planning step comprises the sub-steps of generating a plurality of potential freight movements to satisfy each order and identifying the lowest cost freight movement from said plurality of potential freight movements);

and determining a subset of the set of order guidelines and a subset of source locations ([0010]; This functionality would also allow an organization to dynamically select crossdock and pool point locations (i.e., transportation hubs or through-points) based upon the organization's business requirements and costs) based on the cost factor and utilization of a capacity of a set of transports (pg 18, col. 2, lines 49 - 52; via wherein said accounting step comprises the sub-steps of receiving invoices from carriers for executed freight movements, allocating actual costs detailed in said invoices to orders).

However, Arunapuram fails to explicitly disclose identifying a set of source locations having a set of desired resources for a target location when an order for the set of desired resources is filled.

Morimoto teaches a system and method for tracking and routing shipped items with the feature of identifying a set of source locations having a set of desired resources for a target location when an order for the set of desired resources is fulfilled ([abstract] discusses identifying a set of source locations).

From this teaching of Morimoto, it would have been obvious to modify the system and method of Arunapuram, to include the identifying of a set of source locations taught by Morimoto in order to further provide adequate routing for the items.

As per claim 15, Arunapuram discloses, the machine readable medium of claim 14, having further instructions stored therein, which when executed cause a machine to perform a set of operations, further comprising (pg 18, col. 1, lines 59 - 61; via program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for managing transportation operations for a plurality of orders):

searching iteratively through the set of order guidelines in order of priority for a shipping solution (pg 18, col. 2, lines 13 - 15; via wherein said plurality of potential freight movements are of types selected from the group consisting of direct routes from origin to destination).

As per claim 16, Arunapuram discloses, the machine readable medium of claim 14, wherein the set of order guidelines includes a default order guideline (pg 18, col. 2, lines 43 – 46; via wherein said status updates are used to automatically update records contained in an order database, said database being accessible by customers, carriers, and locations to review the status of select orders).

As per claim 18, Arunapuram discloses, wherein no product of the set of products is associated with more than one default order guideline ([0038]; via orders received through the order interface 306 have a single origin/destination pair).

As per claim 19, Arunapuram discloses, having further instructions stored therein, which when executed cause a machine to perform a set of operations, further comprising (pg. 18, col. 1, lines 59 - 61; via program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for managing transportation operations for a plurality of orders):

altering a size of a shipment to utilize a maximum capacity of the set of transports (pg. 19, col. 2, lines 3 - 7; via wherein said problem-solver constructs said optimal freight movements in batch runs, and wherein said batch runs

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comprise generating a plurality of potential freight movements to satisfy each order).

6. Claims 3, 6, 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arunapuram et al. (2002/0019759) in view of Cappellini (2003/0014286).

As per claim 3, Arunapuram et. al. discloses the claimed invention but fails to explicitly disclose, a loading module to simulate a loading of the shipment of the set of products into the set of transports.

Cappellini teaches a search and retrieval system of transportation-related flexibility defined paths, with the feature of a loading module to simulate a loading of the shipment of the set of products into the set of transports ([0181]; in the preferred embodiment, it is a multidimensional spatial system capable of handling the three dimensions of a physical object, i.e. the width, length and height and the coordinate position within a predetermined space, for example a container) ([0182]; These types of applications can make a mathematical model of the required transport capacities such as the loads, as well as of the available transport capacities such as the cargo containers, in order to substantially simulate the loading conditions within the containing space.) ([0183]; Apart from performing loading operations and optimizations, this type of application can be used or easily adapted for the sole simple use of determining availability of space or capacity, for a new required transport capacity, i.e. to check if a load can

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conveniently fit in a transporting container that is empty or partially full with other loads).

From this teaching of Cappellini, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transportation planning, execution and freight payment manager method of Arunapuram, to include the simulation of loading shipments taught by Cappellini in order to evaluate the feasibility of a shipping arrangement.

As per claim 6, Arunapuram et. al. discloses the claimed invention but fails to explicitly disclose, wherein selecting comprises:

simulating iteratively until the set of desired resources is loaded into the set of transportation units.

Cappellini teaches a search and retrieval system of transportation-related flexibility defined paths, with the feature of simulating iteratively the fulfillment of each group of the set of shipping rules in priority order until the set of desired resources is loaded into the set of transportation units ([0712] In the search to find a possible combination, the system now repeats the processes of FIG. 7 which were applied to an origin-destination pair, to every combination of origin-related first generation path waypoints) ([0182] These types of applications can make a mathematical model of the required transport capacities such as the loads, as well as of the available transport capacities such as the cargo containers, in order to substantially simulate the loading conditions within the containing space).

From this teaching of Cappellini, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transportation planning, execution and freight payment manager method of Arunapuram, to include the iterative simulation of loading shipments taught by Cappellini in order to find the most desired shipping arrangement.

As per claim 11, Arunapuram et al. discloses the claimed invention but fails to explicitly disclose a means for simulating the loading of the set of transports.

Cappellini teaches a search and retrieval system of transportation-related flexibility defined paths, with the feature of a means for simulating the loading of the set of transports([0181]; in the preferred embodiment, it is a multidimensional spatial system capable of handling the three dimensions of a physical object, i.e. the width, length and height and the coordinate position within a predetermined space, for example a container) ([0182]; These types of applications can make a mathematical model of the required transport capacities such as the loads, as well as of the available transport capacities such as the cargo containers, in order to substantially simulate the loading conditions within the containing space.) ([0183]; Apart from performing loading operations and optimizations, this type of application can be used or easily adapted for the sole simple use of determining availability of space or capacity, for a new required transport capacity, i.e. to check if a load can conveniently fit in a transporting container that is empty or partially full with other loads).

From this teaching of Cappellini, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the _ of Arunapuram, to include the simulation of loading shipments taught by Cappellini in order to evaluate the feasibility of a shipping arrangement.

As per claim 17, Arunapuram et. al. discloses the claimed invention but fails to explicitly disclose, wherein selecting comprises:

simulating iteratively until the set of desired resources is loaded into the set of transportation units.

Cappellini teaches a search and retrieval system of transportation-related flexibility defined paths, with the feature of simulating iteratively the fulfillment of each group of the set of shipping rules in priority order until the set of desired resources is loaded into the set of transportation units ([0712] In the search to find a possible combination, the system now repeats the processes of FIG. 7 which were applied to an origin-destination pair, to every combination of origin-related first generation path waypoints) ([0182] These types of applications can make a mathematical model of the required transport capacities such as the loads, as well as of the available transport capacities such as the cargo containers, in order to substantially simulate the loading conditions within the containing space).

From this teaching of Cappellini, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the transportation planning, execution and freight payment manager method of

Arunapuram, to include the iterative simulation of loading shipments taught by Cappellini in order to find the most desired shipping arrangement.

(10) Response to Argument

Appellant argues, (brief, page 7) the Examiner does not address all the characteristics of the source locations recited in the independent claims, including the aspect that the source locations, from which a selection is made, have the products. The regional shipping companies of Morimoto do not equate to "source locations having the set of products" (See independent claims 1, 4, 10, and 14) because the regional shipping companies do not have the products to be shipped... Accordingly, the regional shipping companies have information about the product, but they do not have the products themselves. The requestor who requests quotes from regional shipping companies has the products to be shipped (See *Id.* at Figure 5, item 100 and col. 10, 11.11- 13, the company requesting quotes "receives [the] package to be shipped"). Thus, Morimoto does not teach or suggest "a route determination module to select at least one source location from the set of source locations having the set of products when the order for the set of products is fulfilled" (See independent claims 1, 4, 10, and 14, emphasis added).

However, the claim states, "the set of source locations having the set of products when the order for the set of products is fulfilled." However, fig. 5 depicts item 100 depicts receiving the package to be shipped. Therefore, the

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Examiner respectfully disagrees, because the package is received by the source location, in order to be shipped.

Applicant argues (brief, page 8) that claim 16 recites "the set of order guidelines includes a default order guideline." The Examiner asserts that Arunapuram discloses this aspect on page 18, col. 2, 11. 43-46, which states "wherein said status updates are used to automatically update records contained in an order database, said database being accessible by customers, carriers, and locations to review the status of select orders" (See Final Office Action mailed May 12, 2009, pg. 10). The Appellants respectfully disagree with the Examiner's assertion.

However, in addition [0011] discusses standards-based electronic data interchange, which allow for automation of transportation operations and collaboration with carriers. This standards-based electronic data interchange is understood as including a default order guideline, because the standards allow information to be conformed to a default. Therefore, the Examiner respectfully disagrees.

Appellant argues (brief, page 9) Claim 18 recites "no product of the set of products is associated with more than one default order guideline." The Examiner asserts that Arunapuram discloses this aspect in paragraph 0038, "orders received through the order interface 306 have a single origin/destination pair" (See Final Office Action mailed May 12, 2009, pg. 11). The Appellants respectfully disagree with the Examiner's assertion. Arunapuram does not

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disclose an association of products with default order guidelines. The above sentence of Arunapuram states that an order has one origin and one destination. Arunapuram does not indicate that the origin and destination comprise any type of default. By contrast, it is presumed that the origin and destination locations are specific to their respective orders and therefore are not established by default. Since Arunapuram does not involve default order guidelines, it follows that Arunapuram does not teach or suggest the limitation that "no product of the set of products is associated with more than one default order guideline" (See claim 18).

However, again, [0011] discusses standards-based electronic data interchange, which allow for automation of transportation operations and collaboration with carriers. This standards-based electronic data interchange is understood as including a default order guideline, because the standards allow information to be conformed to a default. The single pairing in [0038] of the EDI mentioned in [0011] teaches claim limitation of "no product of the set products is associated with more than one default order guideline". Therefore, the Examiner respectfully disagrees.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Oluseye Iwarere

/Matthew S Gart/

Supervisory Patent Examiner, Art Unit 3687

Conferees:

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